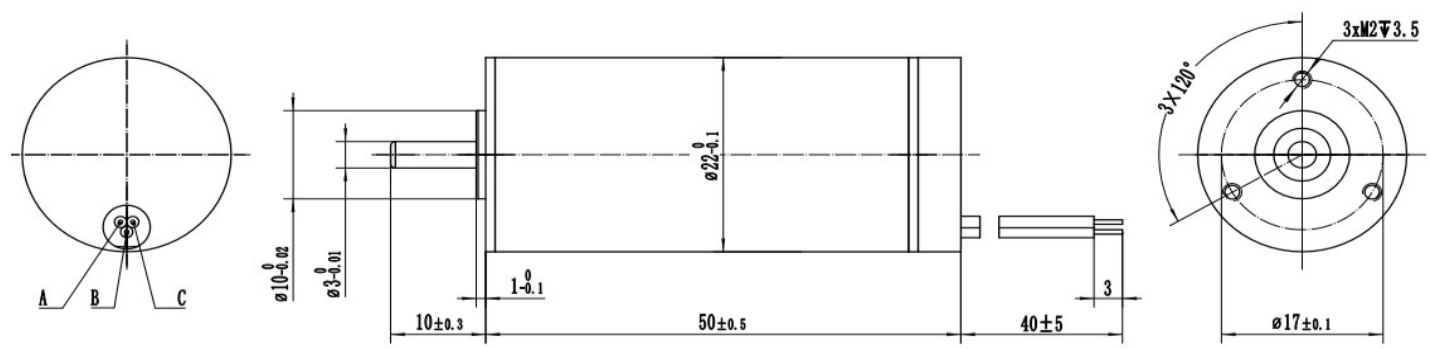


Φ22 mm brushless motor (high power)

Motor Data		104005007						
Values at nominal voltage								
1	Nominal voltage	U_N	30					V
2	No load speed	n_o	40000					rpm
3	No load current	I_o	250					mA
4	Stall torque	M_H	282.9					mNm
5	Stall current	M_I	40.0					A
6	Max. efficiency	η_{max}	85					%
7	Nominal power	W_N	101					W
8	Nominal speed	n_N	36226					rpm
9	Nominal torque (max.continuous torque)	M_N	27					mNm
10	Nominal current (max.continuous current)	I_N	4					A
Characteristics								
11	Terminal resistance phase to phase	R	0.75					Ω
12	Terminal inductance phase to phase	L	0.055					mH
13	Back-EMF constant	K_E	0.75					mV/rpm
14	Torque constant	K_M	7.12					mNm/A
15	Speed constant	K_n	1342					rpm/V
16	Current constant	K_I	0.141					A/mNm
17	Speed / torque gradient	$\Delta n/\Delta M$	141.39					rpm/mNm
18	Mechanical time constant	τ_m	9.7					ms
19	Rotor inertia	J	2.5					gcm ²
Specifications								
20	Operating temperature range:							
	-Motor					-20.....+100		°C
	-winding, max permissible					+125		°C
21	Housing material					aluminium, black anodized		
22	Direction of rotation					electronically reversible		
23	Max. speed	n_{max}				45000		rpm
24	Number of pole pairs					1		
25	Number of phases					3		
26	Magnet material					NdFeB		
27	Hall sensors					sensorless		
Mechanical data								
28	Bearing type					ball bearings, preloaded		
29	Axial play					0 - 0.3		mm
30	Max. axial load (dynamic)					4		N
31	Max. force for press fits (static) (static, shaft supported)					53 250		N N
32	Max. radial loading, 5 mm from flange					16		N
Product								
33	Weight of motor		90					g

Dimensional drawing



Option, cable and connection information

Connection Motor (Cable FF46-1(0.3mm²))

Motor winding A	red
Motor winding B	black
Motor winding C	white